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McGrath (43) **Pub. Date: Oct. 6, 2005**(54) **TECHNIQUE AND DEVICE FOR
THROUGH-THE-WALL AUDIO
SURVEILLANCE****Publication Classification**(51) **Int. Cl.⁷** **H04R 29/00**(52) **U.S. Cl.** **381/56**(76) **Inventor: William R. McGrath, Monrovia, CA
(US)**(57) **ABSTRACT**

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Systems and methods are disclosed for detecting audible sound and/or the vibration of objects. Embodiments of the present invention are able to detect sound and other vibrations through barriers. One embodiment of the invention includes an RF transmitter configured to generate an RF signal having a frequency of at least 100 MHz and an unmodulated amplitude, an RF receiver configured to receive a reflected RF signal comprising an RF carrier having the same frequency as the generated RF signal that is amplitude modulated by an information signal and a signal processor configured to extract audio frequency information from the amplitude of the reflected RF signal.

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